



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,980	10/09/2003	In-Seok Shim	678-1095 (P10739)	8837
28249	7590	08/07/2006	EXAMINER ALAM, FAYYAZ	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			ART UNIT 2631	PAPER NUMBER

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,980

Applicant(s)

SHIM ET AL.

Examiner

Fayyaz Alam

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by **Todd et al. (U.S. Patent # 6,035,183)**.

Consider **claim 1**, Todd et al. disclose a method for displaying signal strength bars (see figure 6) in a fixed wireless access terminal (10) (read as wireless terminal device; figure 2) comprising:

Performing an averaging function (read as analyzing) on the RSSI values over one second intervals (read as collecting RSSI values for a predetermined time T; see column 3, lines 31 - 33) and performing averaging function (read as analyzing) on the bit error counts (read as C/I ratios; since both are attributed to the interference in a communication link; see column 3, lines 36 - 38) over one second interval.

Determining and displaying the bar graph (read as signal strength bars; column 4, lines 47 - 59; figure 6) on the wireless access terminal (10) (read as wireless terminal

Art Unit: 2631

device) based on RSSI_FWD and BER_FWD values (read as RSSI and C/I ratios; column 4, lines 61 - 63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 - 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Todd et al (U.S. Patent # 6,035,183)** in view of **Yang (U.S. Application # 2004/0038650)** and further in view **Reial (U.S. Application # 2004/0053592)**

Consider **claim 2** as applied to claim 1, Todd et al. disclose performing an averaging function on the RSSI values over one second intervals (read as consecutively collecting a predetermined number of RSSI values for a predetermined unit time t and storing the collected RSSI values, since in order to average, one would need multiple values collected over a period of time and store them either temporarily or permanently to perform the averaging function; see column 3, lines 31 - 35). In addition, Todd et al. disclose averaging function being performed on the bit error counts over one second intervals (read as C/I ratio and also read as consecutively calculating a predetermined number of C/I ratios for the predetermined unit of time t and storing the calculated C/I ratios, since in order to average, one would need multiple values collected over a period of time and store them either temporarily or permanently to perform the averaging function; see column 3, lines 36 - 40). Todd et al. also discloses updating the subscriber terminal and displaying the results (read as repeating steps a - d a predetermined number N times; see column 5, lines 1 - 3 and figure 7).

Todd et al. fail to disclose summing N number of RSSI_AVR values obtained by the execution of step e and determining the sum of the RSSI AVR values as an analysis result of the RSSI values for the predetermined time T.

In the related field of endeavor, Yang discloses a calculation that adds the current signal strength (read as RSSI) average and the previous signal strength average (read as summing N number of RSSI_AVR values obtained by the execution of step e and determining the sum of the RSSI_AVR values as an analysis result of the RSSI values for the predetermined time T; see [0026]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the teachings of Yang with that of Todd et al. in order to account for signal strength variation and produce more accurate calculations.

Todd et al. further modified by Yang fail to disclose summing N number of C/I_AVR values calculated by the execution of step e, and determining the sum of the C/I_AVR values as an analysis result of the C/I ratios for the predetermined time T.

In the related field of endeavor, Reial disclose an algorithm that computes an interference ratio (read C/I_AVR) using the sum of the average interference power estimates (read as C/I ratios; see [0027]) (read as summing N number of C/I_AVR values calculated by the execution of step e, and determining the sum of the C/I_AVR values as an analysis result of the C/I ratios for the predetermined time T).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Todd et al. and Yang with the teachings of Reial in order to account for variation in interference measurements and produce more accurate calculations.

Consider **claims 3 and 5** as applied to claim 2, Todd et al. as modified by Yang and further modified by Reial fail to disclose that the predetermined unit time t is 240ms.

In view of *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (See MPEP 2131.04) changing specific values are held to be obvious.

Although, Todd et al. not specifically disclose that the predetermined time unit t is 240ms, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to conveniently change the time from 1s (one second) to 240ms (see column 3, lines 31 - 40).

Consider **claims 4 and 6** as applied to claims 3 and 5 respectively, Todd et al. as modified by Yang and further modified by Reial fail to disclose that 8 RSSI values and C/I ratios are collected and stored during a period of 30ms of the predetermined time T .

In view of *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (See MPEP 2131.04) changing specific values are held to be obvious.

Although, Todd et al. not specifically disclose that 8 RSSI values and C/I ratios are collected and stored during a period of 30ms, it would have been obvious to person of ordinary skill in the art at the time the invention was made to conveniently change the number of collected values to 3 and the time to 1 second (see column 3, lines 31 -40 and column 4, lines 47 - 48).

Consider **claim 7** as applied to claim 2, Todd et al. as modified by Yang and further modified by Reial fail to disclose N equals 5.

In view of *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (See MPEP 2131.04) changing specific values are held to be obvious.

Although, Todd et al. as modified by Yang not specifically disclose N equals 5, it would have been obvious to person of ordinary skill in the art at the time the invention was made to conveniently change the value from 2 to 5 since Yang uses at least two signal strength averages (see [0026]).

Consider **claims 9 and 11** as applied to claim 2, Todd et al. as modified by Yang and further modified by Reial fail to disclose summing the RSSI_AVR and C/I_AVR values using n number of RSSI values and C/I ratios collected in step a and b respectively, wherein n is greater than N .

In the related field of endeavor, Yang discloses adding or summing signal strength averages wherein it is inherent by using the term "average" would mean multiple values " n " are used to compute the average. Yang also discloses adding the signal strength average at least two times by using the previous signal strength average and the current signal strength average and that the process is an iterative one (read as N) where n can be greater than N (see [0026]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Todd et al. with the teachings of Yang in order to account for variations in measurements and produce more accurate calculations.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Todd et al. (U.S. Patent # 6,035,183)**, **Yang (U.S. Application # 2004/0038650)**, and **Reial (U.S. Application # 2004/0053592)** as applied to claims above and further in view of **Charash (U.S. Application # 2005/0033126)**.

Consider **claims 8 and 10** as applied to claim 2, Todd et al. as modified above fail to disclose a manner that excludes maximum and minimum values of the RSSI values and C/I ratios collected in step a.

In the related field of endeavor, Charash discloses a smart averaging scheme, which removes maximum and minimum numbers from a set and then takes the average (see [0063 - 0066]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Todd et al. with the teachings of Charash in order to use a well-known statistical technique to achieve more stable and robust results.

Conclusion

6. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

7. Any inquiry concerning this communication or earlier communications from the

Art Unit: 2631

Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1101. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Fayyaz Alam

July 24, 2006

EDAN ORGAD
PATENT EXAMINER/TELECOMM.

Handwritten signature of Edan Orgad, dated 8/1/06.